

REASON

- **Provide an overview of PGS:**
 - **History**
 - **Principles of Operation**
 - **Safety Regulations**
- **Provide outline of training course**

TRAINING OBJECTIVE

- **In a classroom environment, given a student handout and TM 9-6920-710-12&P-1, you will learn the purpose of the PGS training course and be familiar with safety regulations pertaining to the course.**

PURPOSE OF COURSE

- **Train BFV crews to use PGS.**
- **Teach instructors to conduct PGS training.**
- **Train support personnel on PGS.**

WHY PGS?

- **PGS was developed to provide BFV crews with a tool to train precision, degraded, and battle sight gunnery engagements and conduct force-on-force exercises, without using limited resources.**

WHAT IS PGS ?

- **Strap-on laser-based training device that allows full crew interaction when conducting precision gunnery training**
- **Allows crew to train with all components of BFV FCS**

PGS HISTORY

- **MILES not precision gunnery training device**
- **Armor and Infantry Schools developed requirements**
- **1986 live fire test**
- **1988 first contract awarded**
- **1993 new contract awarded**
- **1995 fielding begins**

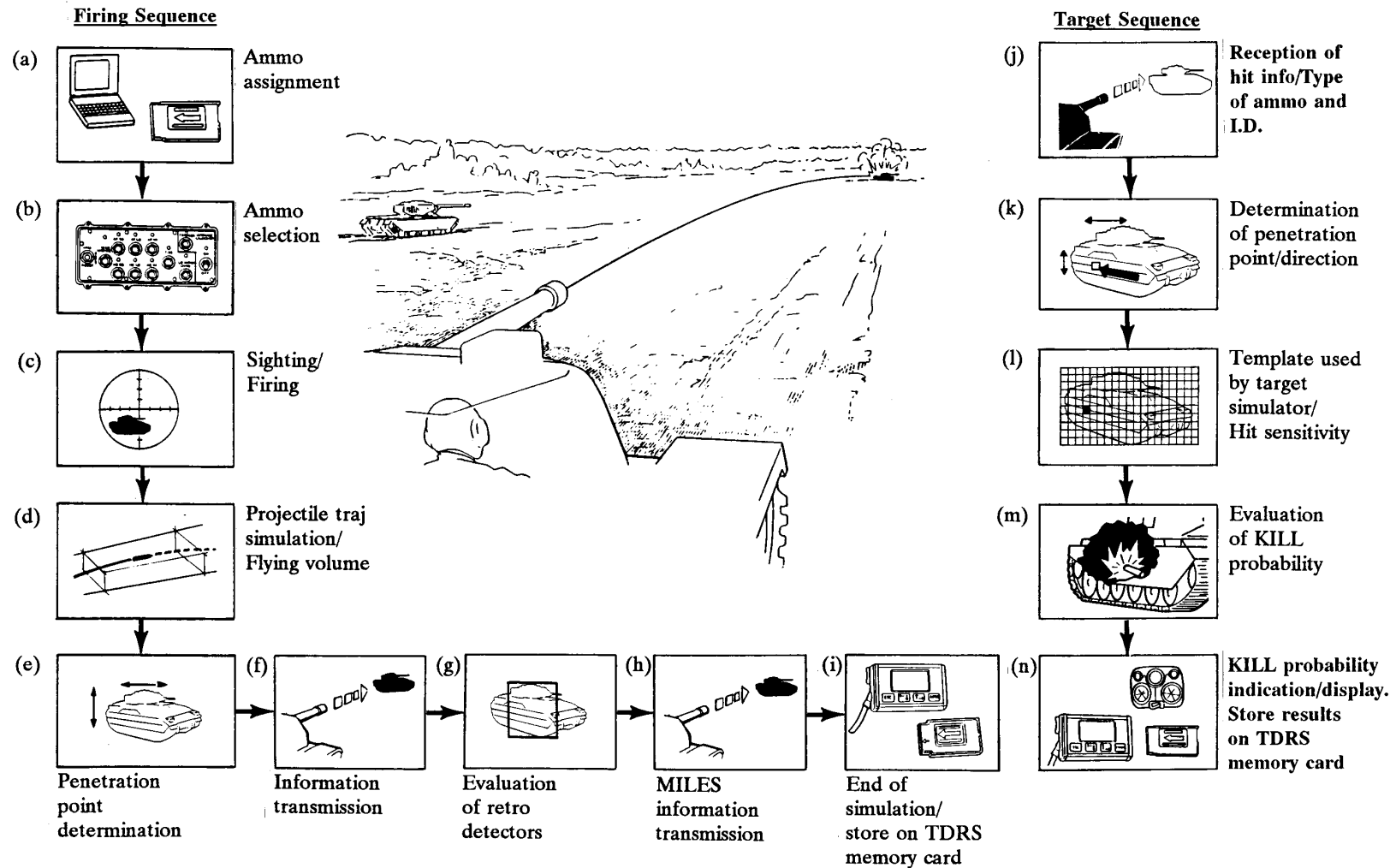
PGS FEATURES

- **Full fire control interface**
- **Replicates 25 mm gun, TOW, and coax engagements**
- **Realistic simulation of ballistics and time of flight for each ammunition**
- **Realistic simulation of TOW family of missiles**
- **Visual effects in gunner's and commander's sights**
- **Simulated ammo transfer hull to turret**
- **Transparent to crew during training**

PGS CAPABILITIES

- **Engage stationary or moving targets from a stationary or moving tank**
- **Panel gunnery or force-on-force capability**
- **Tracking training**
- **Scaled gunnery training**
- **TOW only training**
- **Tamper resistant**
- **Full AAR capability**
- **Adjustable ammunition loads**

PRINCIPLES OF OPERATION



PGS COMPATIBILITY

- **Tank Weapon Gunnery Simulation System (TWGSS)
M1/M1A1**
- **AGS TWGSS**
- **MILES equipped with retro reflector units**
- **Panel targets equipped with retro reflector units and
LTIDs**
- **ATWESS**

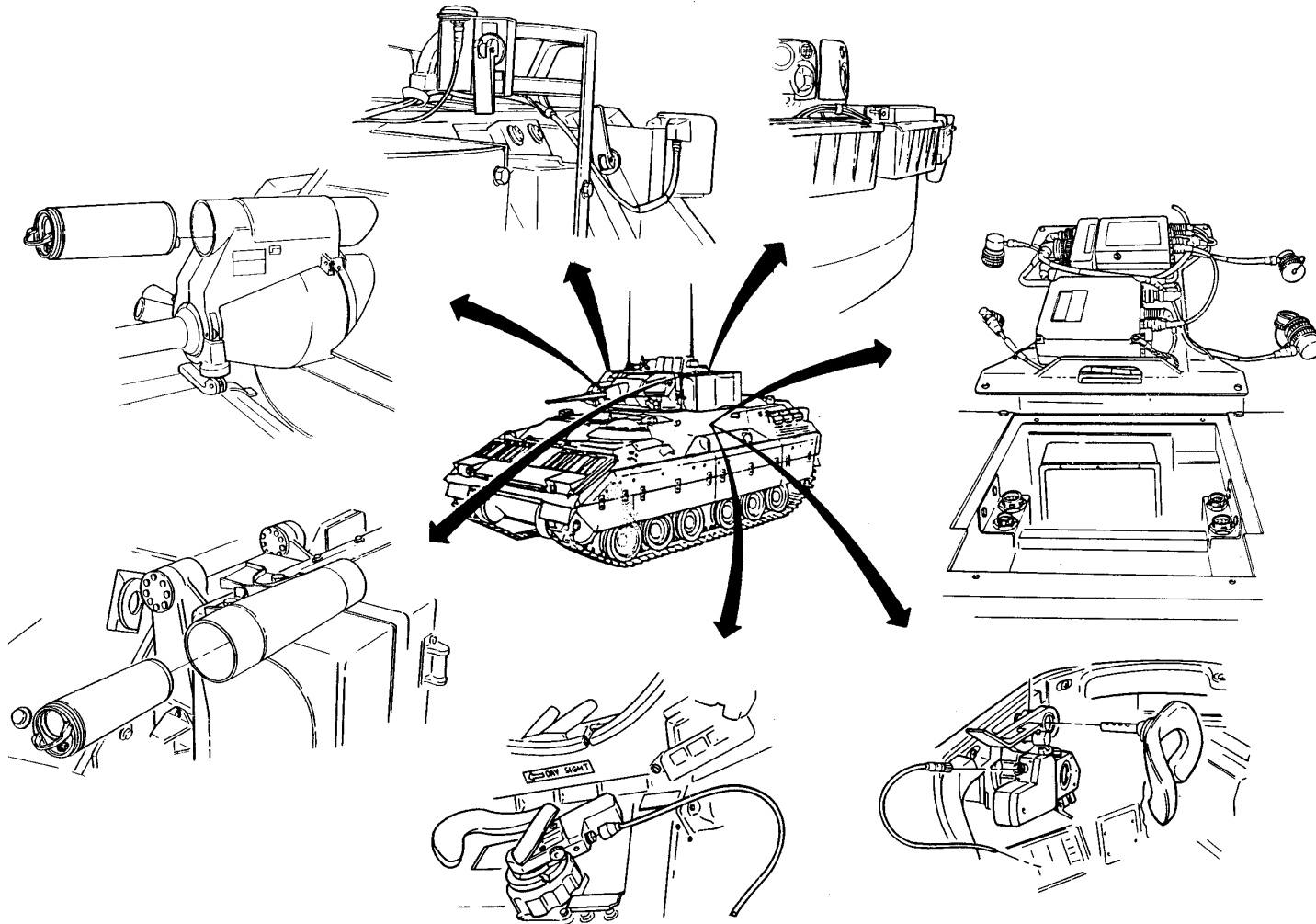
PGS SUB-SYSTEMS

- **PGS consists of:**
 - **Firing System (FS)**
 - **Target System (TS)**
 - **Training Data Retrieval System (TDRS)**

FIRING SYSTEM

- **Firing System consists of:**
 - **Transceiver unit**
 - **TBOS system**
 - **Vehicle interface**
 - **Remote system interface (RSI)**

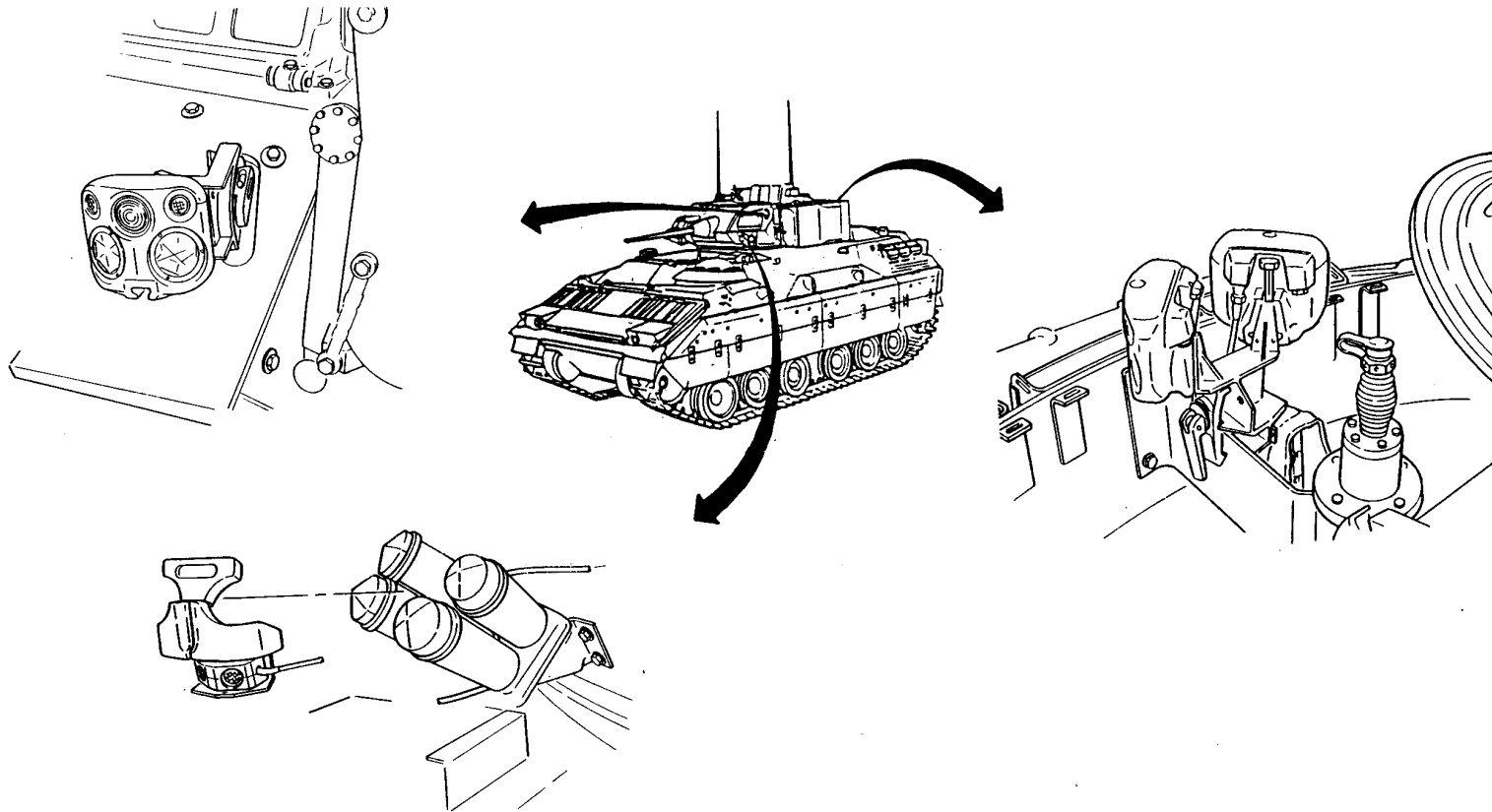
FIRING SYSTEM



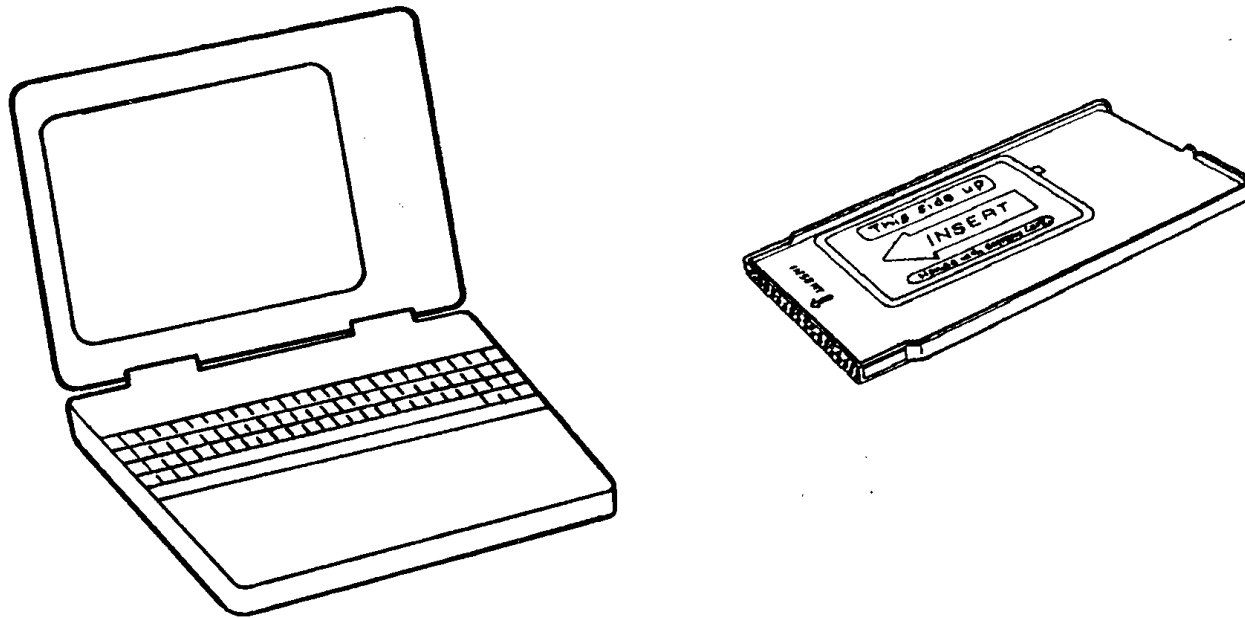
TARGET SYSTEM

- **Target System consists of:**
 - **Target computer unit**
 - **Retro detector units**
 - **Hull defilade detector units**

TARGET SYSTEM



TRAINING DATA RETRIEVAL SYSTEM



TRAINING DATA RETRIEVAL SYSTEM

AAR - [PGS M3 TOW2 v3.0]

File Setup Window Help

Setup AARList AARMap

Card Control

New Setup EXCEL log

HeadModify

Prog card

Application

PGS M3 TOW2 v3.0

Configuration number T14

Training area Ft Knox DST

Validity

☒ Card total reload

☐ First insert only

☐ New ammo

☐ First insert only

Organization

Commander

Gunner

Unit

Event

ID 1 ☐ ID auto inc.

Main weapon

	Turret	Hull
AP	70	240
HE	230	960

Loadtime [s] 0 60

Coax weapon

	Turret	Hull
7.62	800	3750

Loadtime [s] 0 60

Missile weapon

	Turret	Hull
TOW no 1	1	5
TOW no 2	1	5

Loadtime [s] 0 60

Exercise type

☒ Panel Gunnery

☐ Combat

Tracer

☒ Tracer on

☒ Burst on

Obscuration 1 [s]

Presentation

☒ Audio

☒ Fire result on CP

Firing

☒ Full scale

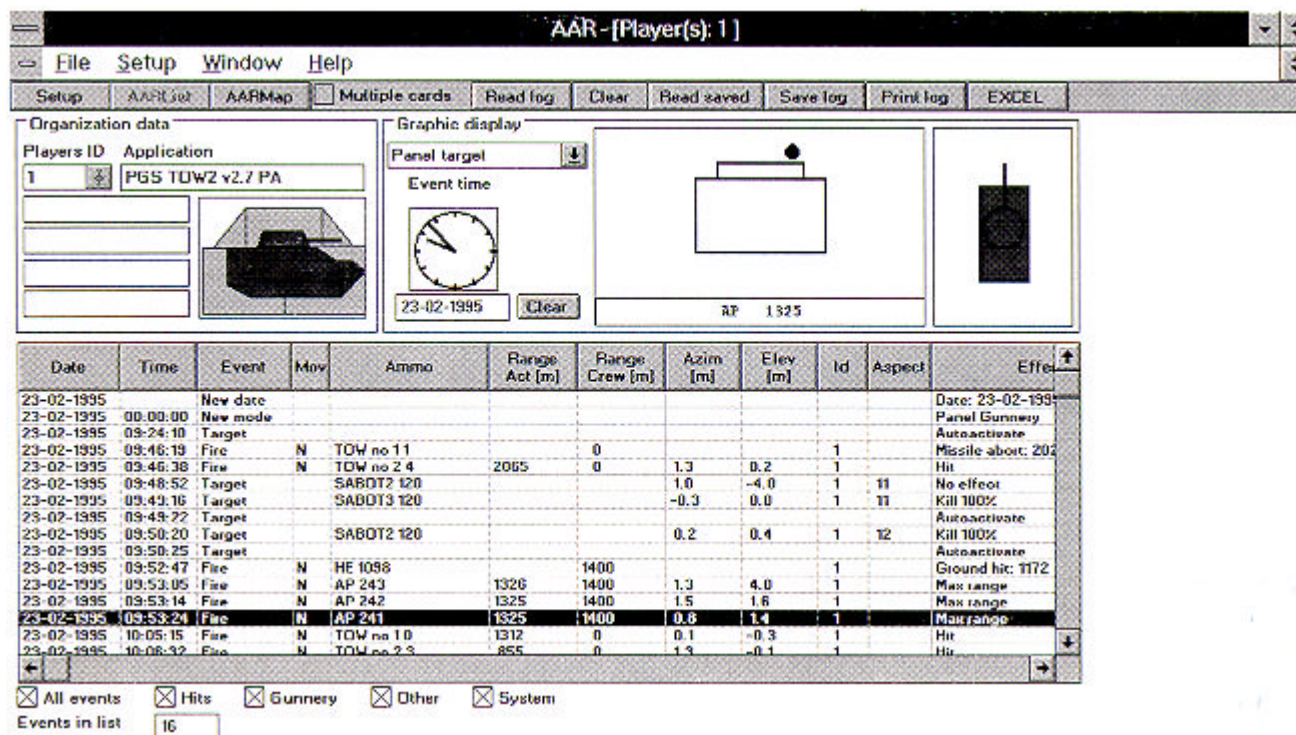
☐ Scaled gunnery

☐ Tracking

☒ Ammo dispersion

Setup

TRAINING DATA RETRIEVAL SYSTEM



GENERAL SAFETY REGULATIONS

- **Mount and dismount over left front or through back ramp**
- **Maintain 3 points of contact on top of vehicle**
- **No smoking within 50 m of vehicle**
- **Do not go over or under gun barrel**
- **Ensure traverse lock is engaged before installing/ removing PGS or entering turret**
- **Ensure vehicle master power switch and turret power switch are in OFF position before installing/removing PGS**
- **Ensure use of proper hearing protection**
- **Observe safety regulations for ATWESS, if used**

LASER SAFETY

- **PGS uses a conditionally eye safe laser (Class 3a)**

WARNING

Transceiver unit has an eye-safety classification of 3A. During operation, DO NOT view the transceiver unit with an unaided eye for an extended period of time. DO NOT AT ANY TIME view the transceiver unit with an aided eye, i.e., optics which magnify from a distance less than 25 meters.

COURSE LESSONS

- **Introduction to PGS**
- **Preparation of M2/M3**
- **Preparation for operation (PMCS)**
- **Installation of PGS**
- **Startup and alignment**
- **Operation of PGS**
- **Post Operational Procedures**
- **Troubleshooting**
- **Preparation of Targets**

COURSE LESSONS

- **Operation of Control Gun (CGUN)**
- **Presentation of Equipment**
- **Training Data Retrieval System (TDRS) Computer Unit**
- **Setup**
- **After Action Review (AAR) List**
- **After Action Review (AAR) Maps**

SUMMARY

- **Purpose and outline of course**
- **PGS purpose and benefit**
- **General safety regulations**
- **Administrative information**

CLOSING STATEMENT

- **This block of instruction has prepared you to understand the concept of PGS and the safety procedures pertaining to its operation.**